HIGHEST LIGHTING NOTES:
1. Poles are designed to support the following:
   A. One (1) cylindrical head assembly with a maximum effective projected area of 6 sf and 340 lbs (Max.)
   B. Eight (8) cylindrical luminaires with a maximum effective projected area of 1.5 sf and 77 lbs each.
2. Shop Drawings: This Index is considered fully detailed, only submit shop drawings for minor modifications not detailed in the Plans.
3. High Mast Structure Materials:
   A. Poles and Backing Rings:
      a. Less than \( \frac{3}{4} \) in diameter: ASTM A1011 Grade 50, 55, 60 or 65
      b. Greater than or equal to \( \frac{3}{4} \) in diameter: ASTM A572 Grade 50, 55, 60 or 65
      c. ASTM A595 Grade A (55 ksi yield) or Grade B (60 ksi yield)
   B. Sheet Metal: ASTM A659 or ASTM A38
   C. Pole Caps: ASTM A1011 Grade 50, 55, 60, or 65 or ASTM B209
   D. Bolt Metal: CROX
   E. Stainless Steel Screws: AISI 316
   F. Anchor Bolts, Nuts and Washers:
      a. Anchor Bolts: ASTM F1554 Grade 55
      b. Nuts: ASTM A563 Grade A Heavy-Hex (5 per anchor bolt)
      c. Plate Washer. ASTM A36 (4 per anchor bolt)
   G. Nut Covers: ASTM B36 (316-F)
   H. Concrete: Class IV (Drilled Shaft)
   I. Reinforcing Steel: Specification 413
   4. Fabrication:
   A. Welding:
      1. Specification Section 460-6.4 and
      2. AASHTO LRFD Specification for Structural Supports for Highway Signs, Luminaires, and Traffic Signals Section 14.4.4
   B. Poles:
      a. Round or 16-sided (Min.)
      b. Upper pole diameter \( \leq 0.14 \) inches per foot
      c. Pole shaft may be up to three sections using telescopic field splices
      d. Circumferentially welded pole shafts and laminated pole shafts are not permitted
      e. Fabricate Pole longitudinal seam welds (2 maximum) with 60 percent minimum penetration or fusion welds except as follows:
         i. Use a full-penetration groove weld within 6 inches of the circumferential tube-to-plate connection and use full-penetration groove welds on the female end section of telescopic (i.e., slip type) field splices for a minimum length of 42 inches.
      f. Identification Tag: (Submit details for approval)
         a. 2”x4” (Max.) aluminum tag
         b. Locate on the inside of the pole and visible from the handhole
         c. Secure with 1/8” diameter stainless steel rivets or screws.
      g. Include the following information on the ID Tag:
         a. Financial Project ID
         b. Pole Type
         c. Manufacturer Name
         d. Tubing Length (Feet of Steel)
         e. Base Bolt Thickness
      h. Except for Anchor Bolts, bolt hole diameters are bolt diameter plus 1/16” and anchor bolts holes are bolt diameter plus \( \frac{1}{2} \)” (Max) prior to galvanizing
      i. Hot Dip Galvanize after fabrication
   5. Coating:
      A. Galvanize Anchor Bolts, Nuts and Washers: ASTM F2229
      B. Hot Dip Galvanize all other steel items including plate washers: ASTM A123
   6. Construction:
      A. Foundation: Specification 455 Drilled Shaft, except that payment is included in the cost of the Structure.
      B. After Installation: Place wire screen between top of foundation and bottom of baseplate in accordance with Specification 649-6.
   7. Wind Speed by County:
      120 MPH
      150 MPH
      170 MPH
      Brevard, Broward, Charlotte, Collier, Escambia, Indian River, Lee, Martin, Miami-Dade, Monroe, Palm Beach, Sarasota and St. Lucie Counties.
**SECTION A-A**

**BASE PLATE AND ANCHORAGE ELEVATION**

(Couduits Not Shown)

- **Base Diameter**
- **Drilled Shaft**
- **Anchor Bolts**
- **Handhole Ring**
- **Base Plate**
- **Center of Drilled Shaft, Base Plate, and Pole**

**SECTION B-B**

(Conduits Not Shown)

- **Drilled Shaft**
- **Anchor Bolts**
- **Handhole Ring**
- **Base Plate**

**SECTION C-C**

- **Drilled Shaft**
- **Anchor Bolts**
- **Handhole Ring**
- **Base Plate**

**SECTION E-E**

- **Drilled Shaft**
- **Anchor Bolts**
- **Handhole Ring**
- **Base Plate**

**FOUNDATION PLAN**

(Anchor Bolts and Conduits Not Shown)

- **Base Diameter**
- **Drilled Shaft**
- **Anchor Bolts**
- **Handhole Ring**
- **Base Plate**

**HANDHOLE RING**

- **Drilled Shaft**
- **Anchor Bolts**
- **Handhole Ring**
- **Base Plate**

**HANDHOLE DOOR**

- **Drilled Shaft**
- **Anchor Bolts**
- **Handhole Ring**
- **Base Plate**

**POLE FOUNDATION**

- **BASE PLATE AND ANCHORAGE ELEVATION**
  - **Conduits Not Shown**

**REVISION**

- **DESCRIPTION:**

**LAST REV**

- **REVISION:**

**INDEX**

- **SHEET:**

**FY 2019-20**

- **STANDARD PLANS**

**HIGH MAST LIGHTING**

- **715-010**

- **3 of 6**
For Pull Boxes between Poles refer to Index 715-001.

2. Slabs to be placed around all Poles and Pull Boxes.

3. Specifications For Road And Bridge Construction.
The contractor's attention is directed to those plan sheets detailing the mounting of luminaires at the pole top. Particular attention is directed to alignment of luminaire light distributions. Special attention must be exercised in the physical alignment of these luminaires to ensure that the approved photometric layout is physically produced at each lighting standard in the field. A marking shall be placed on the external face of the refractor to allow visual inspection of alignment. The marking shall correspond to the 0° axis of the refractor.

Luminaire support ring
- See legend for number of luminaires, lamp wattage and light distribution.

2" slip fitter
- Cover
- Lift cable sheaves
- Lift cables (2 minimum)
- Pole cable & sheaves
- Power Cable Terminator

600 Volt rated Pole Cable. Size of conductors to be determined by luminaire load.

Luminaire support ring
- 2" Slip/Filter Assembly (equally spaced around ring)

Covered receptacle to power luminaires when in the lowered position with Male Inlet.

High mast pole
- Pole Cable
- Power Cable Terminator
- Female Plug

600 Volt rated Circuit Breaker Cable. Size of conductors to be determined by luminaire load.

Winch cable
- Positive drive reversible winch
- Female Plug

A surge protector shall be located in the pole with the circuit breaker. The surge protector shall be mounted at the front near hand hole for easy access.

Grounding Array
- #6 Bonding Ground
- 480V Phase to Phase
- 20 Ground Rod
- 4/0 Ground
- Female Plug
- Circuit Panel Breaker
- Ground Conductor
- Circuit Breaker Cable
- Male Inlet
- Receptacle
- Remote control switch
- Supply cable receptacle

HIGH MAST POLE WIRING DIAGRAM

SCHEMATIC OF REMOTE AUXILIARY POWER UNIT

LOWERING DETAILS

FY 2019-20
STANDARD PLANS

HIGH MAST LIGHTING

INDEX: 715-010
SHEET: 5 of 6
NOTES:

1. Use compacted select material in accordance with Index 120-001.
2. Concrete shall be Class K5 with a minimum strength at 28 days of f'c=2.5 ksi.
3. Outside edge of slab shall be cast against formwork.
4. Use compacted select material in accordance with Index 120-001.
5. Slabs to be placed around all Poles and Pull Boxes. In urban areas or where space is limited slab dimensions may be adjusted as shown in the plans.
6. Concrete for slabs around poles and pull boxes shall be included in the price of pole or pull box.
7. The expansion joint shall consist of ½" of closed-cell polyethylene foam expansion material. The top ½" of expansion material shall be removed after pouring the slab and sealed with an APL approved Type A sealant meeting the requirements of Specification 932.